Abstract

Detection systems and methods for capturing and analyzing particles within a particle sample are provided. The detection system may include, for example, a particle concentrator that can be used to collect and concentrate particles on a sample collection surface, an energy source for providing energy to induce fluorescence in the particles, and a detector for detecting at least some fluorescence induced in the particles by the energy source. The detection system may include a heater and/or cooler for controlling the temperature of the particle sample during testing.